VERSION WITH MARKINGS TO SHOW CHANGES MADE

Applicant: Ronald T. Raines

Date: October 15, 2002

Serial No.: 09/234,028

Group Art Unit: 1652

Filed: 01/20/99

Examiner: R. Hutson

Title: OXIDATION-RESISTANT

File No.: 960296.95360

RIBONUCLEASE INHIBITOR

An illustration of the three dimensional structure of the human ribonuclease inhibitor is illustrated in Fig. 1. The sequence of the ribonuclease inhibitor can be found in Lee et al. Biochemistry 27:8545-8553 (1988), the disclosure of which is hereby incorporated by reference. From both Figure 1 and the sequence of the protein, it can be readily seen that some of the cysteine residues are located adjacent to each other. The amino acid residues at positions numbered [95] 94 and [96] 95 and 328 and 329 in the human RI sequence as numbered in Lee et al. are all cysteines. It was theorized that these cysteine residues would be the most likely to be oxidized to form disulfide bonds which would interfere with the biological activity of the molecule. Note that in SEQ ID NO:3 below, these cysteine residues appear as amino acids 95, 96, 329 and 330, the difference being the N-terminal methionine which is counted as residue 1 in the deduced sequence of SEQ ID:3 below and as residue 0 in the sequence of Lee et al. To remain consistent with prior work in the field, the numbering convention used by Lee et al. is used in this specification.

QBMAD\342748.1